

# **ABSTRACT OF THE INVENTION**

The present invention relates to a method of designing an ion channel blocker for an ion channel which includes providing an ion channel having an external vestibule portion and raising an antibody, binding portion, probe, or ligand specific to the external vestibule portion of the ion channel, where the antibody, binding portion, probe, or ligand inhibits ion transport through the ion channel. The present invention further relates to a method of inhibiting ion transport through an ion channel, a method for screening a drug for effectiveness as an ion channel blocker, and an antibody, binding portion, probe, or ligand.

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